DEV-2020-3218R2  
The development of infants' responses to mispronunciations: A Meta-Analysis  
*Developmental Psychology*  
  
Dear Dr. Von Holzen,  
  
Thank you very much for submitting your revised manuscript "The development of infants' responses to mispronunciations: A Meta-Analysis" for review and consideration for publication in *Developmental Psychology*. I sincerely appreciate the opportunity to review the manuscript. I have now received 2 reviews of the manuscript (one from the original round of revision, and one new reviewer), and I have read the manuscript carefully myself. The reviews are appended to this email. The reviewers and I found that you have been responsive to the concerns raised in the previous version of your manuscript, but a few additional concerns remain. However, at the same time, the reviewers also indicated that there are a few points where the manuscript would benefit from additional clarity and discussion.  I encourage you therefore to revise and resubmit the manuscript.   
  
To do so, please go to <https://www.editorialmanager.com/dvl/> and log in as an Author. You will see a menu item called "Submissions Needing Revision". You will find your submission record there. Please resubmit within 30 days. If you need more time to complete additional analyses, this time period is negotiable, but let us know beforehand. Please include an 'Authors Response to Reviewers' with your revision that includes details on how you addressed the various issues that I highlighted above, as well as the other issues raised by the reviewers. I do not anticipate that it will be necessary to send the manuscript out for an additional round of reviews.  
  
Thank you for considering *Developmental Psychology* as an outlet for your work.  
  
Sincerely,  
Erik D. Thiessen, Ph.D.  
Associate Editor  
Developmental Psychology

**EDITOR'S NOTE: Please be mindful of the page length guidelines of 35 pages inclusive of everything except tables and figures. We are fine with going over this a bit because reference sections are longer in meta-analyses.**  
  
  
Reviewers' comments:  
  
Reviewer 1: Thank you for the opportunity to review this paper. I appreciated the  
revisions that the authors undertook, and I continue to see this as a  
useful paper. I have a few quite minor comments or edits to suggest,  
but otherwise will be pleased to see this in print.  
  
Fig. 3: The caption (and others) still refers to colors, here orange  
and blue. (I think having colors would be fine -- I only thought it  
would be better if the colors also worked without color. I'm on  
board with varying both luminance and hue.)  
  
I also thought the plots could be a little taller, and the titles  
("Object Recognition", ...) less huge.  
  
pp. 26-27 "This could lead to an increase in significant results and  
even alter the developmental trajectory of mispronunciation  
sensitivity." It wouldn't really alter the developmental trajectory  
as much as it would alter the \_apparent\_ developmental trajectory.  
  
p.31 discusses why children do not show stronger effects of  
mispronunciations when the distracter picture is an unfamiliar object.  
The paper indicates that "no studies have directly examined this  
assertion", which is true. This is probably because when children  
hear a minor mispronunciation, they do not think that they are hearing  
a novel word at all, or at least not a word for another object. This  
has been shown repeatedly (Dautriche, Swingley, & Christophe, 2015;  
Swingley & Aslin, 2007; Swingley, 2016; perhaps also White & Morgan,  
2008). Given this work, one would not expect that a word-learning  
effect would boost the size of mispronunciation effects when a novel  
object is available.  
  
p. 33 says: "Looks to the target in response to mispronunciations  
may be slower than in response to correct pronunciations in infants  
(as predicted by TRACE, Mayor & Plunkett, 2014)..." This fact is  
certainly consistent with TRACE modeling, but it's strange to call it  
a prediction, since it was already shown by Swingley & Aslin in 2000.  
  
p. 34 "A lack of a field standards can have serious consequences," --  
the first part of this sentence is not grammatical. Isn't this also  
more of a technique than a field? I guess I think of psychology as a  
field. Or maybe developmental psychology. How about something like  
"Variation in measurement standards can ..."  
  
p.34 recommends growth curve analysis as a methodological  
improvement. I haven't followed this closely, but I have heard a few  
discussions that this method has a high false positive rate because it  
doesn't model the non-independence of sequential data points. I don't  
know the truth of the matter about this, but I suppose if making  
recommendations, the authors would want to have a view of this. (and  
-- perhaps they do, and have reassured themselves this isn't an  
issue.)  
  
Bibliography: the entire bibliography is given twice, at least in my  
copy.  
  
  
  
  
Reviewer 3: This manuscript presents a well-designed meta-analysis on infants' sensitivity to mispronunciations (e.g., Swingley & Aslin, 2000), an oft-studied and theoretically relevant topic in the field of language development. The authors included records from 32 studies that measured infants' mispronunciation sensitivity and we believe that the field will be interested in the findings of this meta-analysis. We found the meta-analysis to be well-executed and the authors were responsive to the previous reviews. Overall, we believe that with some minor revisions (as suggested below), this work will make a valuable contribution to both the literature on mispronunciation sensitivity and to the growing call for best practices in open science.  
  
General Comments:  
We thought that the authors satisfactorily responded to the majority of the reviewer's comments. We have a few additional considerations and points of clarification, some of which were mentioned by the previous reviewer, that we believe would strengthen the manuscript.  
  
On Page 6 on the manuscript (Lines 109-111): We do not understand what the authors mean here by developmental trajectory. Their literature review suggests that both infants and adults show graded sensitivity to mispronunciation size, so it's unclear how this sensitivity changes over development, as a trajectory would imply.  
Similarly, on Page 24, starting on Line 591, the authors state that:  
  
"The developmental trajectory of mispronunciation sensitivity was influenced by type of mispronunciation and overlap between target and distractor labels, but mispronunciation size, mispronunciation position, and distractor familiarity were found to have no influence."  
  
Their size of mispronunciation analysis showed graded sensitivity, in line with previous infant and adult studies, but there was no moderator of age.  
There are a few more instances where the authors talk about developmental trajectory that are vague. On Page 26, Line 623, the authors say that "… could lead to an increase in significant results and even alter the developmental trajectory of mispronunciation sensitivity." This wording is not precise as it could be—data analysis decisions could influence reported results, not developmental trends (if a true developmental effect exists). We do feel as if the authors do a nice job of talking about how their analyses can test for developmental trajectories in the General Discussion (Page 29, Lines 707-715), and their summary here treats development with the proper precision. We would like to see this level of consideration when using this term in other contexts in the manuscript.  
  
On page 29, in agreement with the original reviewer, we have a few further comments regarding their discussion of vocabulary size measures. On Lines 718-722, in addition to researchers' lack of interest in vocabulary size, another reason that only 13 papers reported vocabulary correlations is that previous researchers may have not reported null results. Would a funnel plot including only the 13 papers that report vocabulary be helpful to probe if there's a publication bias for significant vocabulary correlations? We think that non-significant vocabulary correlations in file drawer are just as likely an explanation as a reduction of interest by researchers.  
  
To the extent that the authors believe that vocabulary size is of theoretical interest, which we believe it is, it might be worthwhile to suggest that researchers include infants' vocabulary sizes in all publications, regardless of their significance. Further, they might suggest that future work includes vocabulary size as a continuous variable in statistical mixed-models, which would be a more robust test of the relationship between vocabulary size and mispronunciation sensitivity.  
  
Similarly, to the reviewer's comments about the colors of the figures on the previous draft, we had a difficult time reading a few of the figures in greyscale. If there is a way to create more contrast, it would make their figures easier to interpret. This is especially the case in Figure 3—the mispronunciation line blends in with the error visualization. Also, in the figure caption for Figure 3, the colors are still labeled as "orange" and "blue". The greyscale contrast concern and the color naming in the captions persists in some of the other figures, too (e.g., Figure 4).  
  
Proofing comments:  
Line 48: "infants' initially episodic representations" ◊ "initial" might sound better! We get the gist; it just reads a little strange to us.  
  
Lines 187-188: There seems to be a problem with numbers here or how the authors came up with 299 items needs to be made more explicit. I think that the authors removed 99 duplicated between the expert list and the google search list, but this isn't totally clear.  
  
Line 255: typo, maybe remove 'are' in sentence "…. studies [are] typically examine…"  
  
Line 483: missing period  
  
Line 576/577: The authors claim that studies with younger children did not control for overlap between target label and distractor label. However, we believe that most of these studies intentionally did not have overlap. These seems like different things.  
  
Line 747: factors is spelled incorrectly (facturs)